

MERCK INSTITUTE
FOR
THERAPEUTIC RESEARCH

RAHWAY, N. J.

November 15, 1951

Dr. Joshua Lederberg
Department of Genetics
University of Wisconsin
Madison, Wisconsin

Dear Dr. Lederberg:

Your observations on the growth response to air of the Murray resistant strain of E. coli are not surprising to us. The published studies of streptomycin-resistant E. coli strains were on cultures that had been maintained for a long time (a year or more, in both cases) previous to the metabolic studies, as was noted in the paper. Since publication of those data, we have several times isolated resistant strains of E. coli, Gratia and Murray, and in all cases the freshly isolated organisms grew as well as the parent sensitive strains. However, on continued cultivation with or without streptomycin, for six months or longer, it has been noted that some of these resistant strains grew very poorly, and resembled the organisms previously described. We do not know whether it is a matter of chance that the organism loses the ability to respond to air, since the phenomenon was not subjected to detailed study, and we therefore have hesitated to publish the data we do have. It is important, of course, that such a study be done, but we are unfortunately not in a position to carry it out at this time. It would be interesting to determine the effect of continued cultivation on the Murray resistant strain we sent to you, which was isolated in August of this year, and was transferred monthly since on tryptone-yeast extract- K_2HPO_4 agar (AC agar), at 100 μ g streptomycin per ml. It had originally been isolated from this agar in the presence of 80 μ g streptomycin per ml, and was transferred serially in increasing concentrations of streptomycin up to 5000 μ g per ml, after which it was maintained as stock culture.

It is indeed the same Pat Smith who was at Yale, but she is now working with Dr. George Wald at Harvard.

Sincerely yours,


Evelyn L. Oginsky

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